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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,419	01/06/2005	Kazuhiro Mizude	1248-0762PUS1	5266

2292 7590 10/30/2006

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EXAMINER	
NGUYEN, LAM S	

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/520,419	MIZUDE ET AL.	
	Examiner	Art Unit	
	LAM S. NGUYEN	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *2-7 and 15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,8,9,12,16 and 17* is/are rejected.

7)☒ Claim(s) *10,11,13 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/06/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

In response to the restriction requirement, the applicant elected claims 1, 8-14, and 16-17 (Election dated 08/28/2006) for further examination. As a result, claims 2-7 and 15 are withdrawn from further consideration.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

1. Claims 1, 8-9, 12, and 16-17 are rejected under 35 U.S.C. 102(a) as being anticipated by Ikeda (US 6419338).

Regarding to claims 1, 16-17:

Ikeda discloses an inkjet print device which prints by reciprocally moving a carriage carrying a print head (*FIG. 2, elements 102*) in a main scan direction while controlling ink ejection from the print head according to a carriage position both in a forward movement and in a return movement (*FIG. 2*), said device comprising:

position sensing means for sensing the carriage position (*column 11, lines 31-33, lines 53-54*);

speed sensing means for sensing moving speed of the carriage (*column 11, lines 55-57*);

correction quantity determining means for presetting a relationship between the moving speed of the carriage and a positional correction quantity for correcting a discrepancy in an ink hitting position resulting from the ink ejection from the print head while the carriage is moving and for determining the positional correction quantity from the moving speed of the carriage sensed by the speed sensing means according to the preset relationship (*FIG. 5A-C and column 2, line 51: The equation (2) expresses the relationship between the moving speed of the carriage (VCr1 or VCr2) and the positional correction quantity (X1 or X2)*); and

ejection control means for controlling the ink ejection from the print head according to the positional correction quantity determined by the correction quantity determining means and the carriage position sensed by the position sensing means (*column 3, lines 30-40: The ink ejection is controlled in accordance to the detected scanning speed (or the moving speed of the carriage) that relates to the positional correction quantity as expressed in the equation (2). Column 9, lines 4-15: The ink ejection is also controlled, in accordance to the position of the carriage, to operate in a acceleration mode, a constant speed mode, or a deceleration mode*).

Regarding to claims 8-9: wherein the position sensing means contains an encoder producing a pulse signal output according to a displacement of the carriage, the speed sensing means contains time measurement means for measuring a cycle of the pulse signal output from the encoder, and the correction quantity determining means presets a relationship between the cycle of the pulse signal output and the positional correction quantity and determines the positional correction quantity from the cycle of the pulse signal output measured by the time measurement means according to the preset relationship, wherein the relationship between the cycle of the pulse signal output and the positional correction quantity is an inversely

proportional relationship (*column 4, lines 43-50: The detector detects the carriage speed by measuring the periodicity (cycle) or encoder pulses from a linear encoder. In addition, since the speed and the periodicity (cycle) are inversely proportional, the positional correction quantity and the periodicity (cycle) thus are also inversely proportional*).

Regarding to claim 12: further comprising position details sensing means for dividing the cycle of the pulse signal output time-measured by the time measurement means and counting every time the divided cycle elapses so as to sense position details of the carriage (*FIG. 7: Counting the cycle of the encoder pulse*).

Allowable Subject Matter

2. Claims 10-11 and 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding to claim 10: The primary reasons for the indication of the allowability of the claim is the inclusions therein, in combination as currently claimed, of the limitation that wherein the correction quantity determining means prestores the cycle, TO, of the pulse signal output at a certain speed V0 of the carriage and also prestores the positional correction quantity dX0 and determines the positional correction quantity dX(t) from the cycle, T(t), of the pulse signal output measured by the time measurement means in the speed sensing means as given by an equation $dX(t) = dX0 \times T0/T(t)$ is neither disclosed nor taught by the cited prior art of record, alone or in combination.

Regarding to claim 11: The primary reasons for the indication of the allowability of the claim is the inclusions therein, in combination as currently claimed, of the limitation that

wherein the correction quantity determining means prestores a correction quantity table representing a relationship between multiple cycles of the pulse signal output and multiple positional correction quantities and determines the positional correction quantity from the cycle of the pulse signal output measured by the time measurement means in the speed sensing means in reference to the correction quantity table is neither disclosed nor taught by the cited prior art of record, alone or in combination.

Regarding to claim 13: The primary reasons for the indication of the allowability of the claim is the inclusions therein, in combination as currently claimed, of the limitation that wherein the time measurement means obtains the cycle of the pulse signal output as digital data; and the position details sensing means divides the cycle of the pulse signal output time-measured by the time measurement means by shifting data of the cycle of the pulse signal output toward the right by a predetermined number of times is neither disclosed nor taught by the cited prior art of record, alone or in combination.

Regarding to claim 14: The primary reasons for the indication of the allowability of the claim is the inclusions therein, in combination as currently claimed, of the limitation that the position sensing means contains approximate position sensing means for measuring a number of pulses of the pulse signal output from the encoder to sense an approximate position of the carriage and a combined value of a count by the approximate position sensing means as high order digits and a count by the position details sensing means as low order digits is the carriage position is neither disclosed nor taught by the cited prior art of record, alone or in combination.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S. NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LAM SON NGUYEN